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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : A61M 25/00, 25/10		A1	(11) International Publication Number: WO 00/43062
			(43) International Publication Date: 27 July 2000 (27.07.00)
(21) International Application Number: PCT/US00/01485		(74) Agents: HANKE, Gunther et al.; Fulwider, Patton, Lee & Utecht, P.O. Box 22615, Long Beach, CA 90801-5615 (US).	
(22) International Filing Date: 22 January 2000 (22.01.00)			
(30) Priority Data: 60/116,836 22 January 1999 (22.01.99) US 09/378,676 20 August 1999 (20.08.99) US		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 09/378,676 (CIP) Filed on 20 August 1999 (20.08.99)			
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(54) Title: AORTIC CATHETER WITH FLOW DIVIDER AND METHODS FOR PREVENTING CEREBRAL EMBOLIZATION

(57) Abstract

The invention is a catheter with a fluid flow divider positioned near the distal end of the catheter for dividing a first lumen into two channels at a point where a second lumen branches from the first lumen, and for selectively perfusing the branch lumen and the first lumen. The invention is particularly suited for use in the aortic arch. The fluid flow divider may comprise one or more inflatable chambers or one or more deployable shrouds comprising a plurality of arms with a web extending between adjacent arms. The inflatable chambers may be relatively noncompliant or they may be compliant, exhibiting elastic behavior after initial inflation, to closely fit the aortic lumen size and curvature. The catheter may further include one or more additional or auxiliary flow control members located upstream or downstream from the fluid flow divider to further segment the patient's circulatory system for selective perfusion to different organ systems within the body or to assist in anchoring the catheter in a desired position. The catheter may also include a selectively deployable embolic filter for capturing embolic materials in the blood stream.

